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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,622	04/02/2004	Paul Lapstun	HYT007US	2086
24011	7590	09/07/2004	EXAMINER	
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			TAYLOR, APRIL ALICIA	
			ART UNIT	PAPER NUMBER
			2876	

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/815,622

Applicant(s)

LAPSTUN ET AL.

Examiner

April A. Taylor

Art Unit

2876



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 and 52-70 is/are rejected.
- 7) ☒ Claim(s) 39-51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on applications filed in Australia on April 07, 2003 and April 15, 2003. It is noted, however, that applicant has not filed a certified copy of the 2003901617 and 2003901795 applications as required by 35 U.S.C. 119(b).

### ***Specification***

2. The disclosure is objected to because of the following informalities: The co-pending applications are listed with the attorney document numbers, which should be change to US application numbers (see pages 1-2). Appropriate correction is required.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The abstract of the disclosure is objected to because it contains a typographical error. Substitute "including:a" with -- including: a -- (see line 3). Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

5. Claims 1-58 and 63-70 are objected to because of the following informalities:

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Re claim 1: Substitute "adapted to read" with -- for reading -- (see line 1).

Re claim 2: Substitute "adapted to be" with -- being -- (see line 1).

Re claim 5: Substitute "is adapted to sense" with -- senses -- (see line 1).

Re claim 9: Substitute "is adapted to read" with -- reads -- (see line 1).

Re claim 11: Substitute "is adapted to sense" with -- senses -- (see line 2).

Re claim 13: Substitute "," with -- . -- (see end of line 2).

Re claim 14: Substitute "the beam generator" with -- a beam generator --.

Re claim 26: Substitute "is adapted to use" with -- uses -- (see line 1).

Re claim 37: Substitute "is adapted to detect" with -- detects -- (see line 1).

Re claim 38: Delete "is adapted to (see line 1).

Re claim 38: Substitute "determine" with -- determines -- (see lines 2 and 3 respectively).

Re claim 38: Substitute "activate" with -- activates -- (see line 4).

Re claim 39: Substitute "centre" with -- center -- (see line 3).

Re claim 40: Substitute "is adapted to distinguish" with -- distinguishes -- (see lines 1 and 2).

Re claim 48: Substitute "centre" with -- center -- (see line 4).

Re claim 56: Substitute "adapted to read" with -- for reading -- (see line 1).

Re claim 57: Substitute "it" with -- the product -- (see line 2).

Re claim 63: Substitute "is adapted to sense" with -- senses -- (see line 2).

Re claim 64: Substitute "adapted to scan" with -- for scanning -- (see lines 1 and 2).

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Re claim 64: Substitute "it" with -- the laser -- (see line 8).

Re claim 65: Substitute "adapted to scan" with -- for scanning -- (see line 1).

Re claim 66: Substitute "adapted to scan" with -- for scanning -- (see line 1).

Re claim 66: Substitute "generate" with -- a processor for determining -- (see line 12).

Re claim 67: Substitute "adapted to scan" with -- for scanning -- (see line 1).

Re claim 68: Substitute "adapted to scan" with -- for scanning -- (see line 1).

Re claim 69: Substitute "adapted to scan" with -- for scanning -- (see lines 1 and 2).

Re claim 69: Substitute "adapted to be" with -- being -- (see line 6).

Re claim 69: Substitute "it" with -- the laser -- (see line 7).

Re claim 70: Substitute "adapted to read" with -- for reading -- (see line 2).

Re claim 70: Substitute "adapted to be" with -- being -- (see line 6).

Re claim 70: Substitute "it" with -- the radiation source -- (see line 7).

Appropriate correction is required.

(Note: All other claims are objected to since they depend upon an objected claim.)

6. Applicant is advised that should claims 17 and 18 be found allowable, claims 52 and 53 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-7, 9-24, 29-38, 52-70 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilz, Sr. et al. (US 6,772,949), hereinafter Wilz.

Re claims 1, 2, 4, 6, 11, 21, 22, 56-63: Wilz teaches a reading device comprising a housing for mounting on at least one finger of an user, the housing including an aperture and a prism; a radiation source; a sensor provided in the housing; a processor for determining product identity data indicative of the identity of the product item; a harness worn by the user; a focusing system to focus radiation from the sensing region on to the sensor; and an input control, wherein the sensor senses the coded data upon activation of the input control by the user. (See figures 5A-5D; col. 20, line 45+; col. 41, line 26 to col. 44, line 34)

Re claim 3: Wilz teaches wherein the house is a thimble (see fig. 5D).

Re claim 5: Wilz teaches wherein the sensor senses coded data when an interface surface is provided in a sensing region positioned adjacent the aperture (see figs. 5A-5D).

Re claim 7: Wilz teaches wherein the focusing system includes a lens positioned between a prism and the image sensor (see col. 41, line 26 to col. 44, line 34).

Re claim 9: Wilz teaches wherein the reading device reads interface surfaces provided in a direction substantially orthogonal to a plane defined by the user's hand (see figs. 5A-5D).

Re claims 10 and 61: Wilz teaches wherein the aperture is positioned so as to allow the sensor to sense coded data when the user grasps a product item.

Re claim 12: Wilz teaches wherein the reading device further includes a second housing mounted to a body portion of the harness, the processor being provided in the second housing and being coupled to the sensor by a data link (see fig. 5D).

Re claims 13 and 36: Wilz teaches wherein the coded data is printed on the interface surface in infrared ink, and the radiation source generates infrared radiation (see col. 41, line 26 to col. 44, line 34).

Re claim 14: Wilz teaches wherein a beam generator is an LED (see col. 41, line 26 to col. 44, line 34).

Re claim 15: Wilz teaches wherein the sensor is a 2-D image sensor (see col. 41, line 26 to col. 44, line 34).

Re claim 16: Wilz teaches wherein the image sensor is an infrared image sensor (see col. 41, line 26 to col. 44, line 34).

Re claims 17, 37, and 52: Wilz teaches wherein the reading device sensed coded data from the interface surfaces of a number of product items substantially simultaneously.

Re claims 18 and 53: Wilz teaches wherein the reading device further includes a memory (see col. 41, line 26 to col. 44, line 34).

Re claim 19: Wilz teaches wherein the coded data encodes an EPC associated with the product item, and wherein the processor determines the EPC (see col. 41, line 26 to col. 44, line 34).

Re claim 20: Wilz teaches wherein the product identity data distinguishes the product item from every other product item (see col. 41, line 26 to col. 44, line 34).

Re claim 23: Wilz teaches wherein the processor determines the product identity data of the product item during a read event; and generates the read data if the determined product identity data is different to product identity data determined during previous read events (see col. 41, line 26 to col. 44, line 34).

Re claim 24: Wilz teaches wherein the processor compares the determined product identity data to previously determined product identity data; and generates read data representing the identity of the product item if the determined product identity data has not been previously determined (see col. 41, line 26 to col. 44, line 34).

Re claims 29, 30, 33, and 34: Wilz teaches wherein the coded data is indicative of a plurality of reference points; wherein each reference point corresponds to a respective location on the interface surface; and wherein the processor generates position data representing the position of a sensed reference point on the interface surface (see col. 41, line 26 to col. 44, line 34).

Re claims 31 and 32: Wilz teaches wherein the interface surface includes at least one region, the region including coded data, and wherein the processor determined the



identity of the at least one region from at least some of the sensed coded data (see col. 41, line 26 to col. 44, line 34).

Re claim 35: Wilz teaches wherein the reading device includes a bandpass filter (see col. 81, line 53 to col. 82, line 11).

Re claim 38: Wilz teaches wherein the processor determines the presence of coded data; determines product identity data; and activates an alarm if the determined product identity data is indicative of more than one product item (see col. 41, line 26 to col. 44, line 34).

Re claims 54 and 55: Wilz teaches wherein the interface surface is at least one of a product item packaging; a product item labeling; and a surface of the product item (see fig. 6A).

Re claims 64-70: Wilz teaches a scanning device comprising a laser for emitting at least one scanning beam, the scanning beam being directed in first and second orthogonal directions to thereby generate a raster scan pattern over a scanning patch, the scanning patch being provided in the sensing region; at least one beam controller; a sensor; and a processor (see col. 66, line 57 to col. 68, line 18).

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilz, Sr. et al. (US 6,772,949), hereinafter Wilz. The teachings of Wilz have been discussed above.

Wilz discloses the claimed invention except for positioning the aperture on the underside of the user's finger when in use. It would have been an obvious to one of ordinary skill in the art to positioned the aperture on the underside of the user's finger, since applicant has not disclosed that positioning the aperture on the underside of the user's finger solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with either feature.

11. Claims 25-28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilz, Sr. et al. (US 6,772,949), (hereinafter Wilz) in view of Roustaei et al (US 6,685,095), (hereinafter Roustaei). The teachings of Wilz have been discussed above.

Wilz fails to teach or fairly suggest wherein the coded data is redundantly encoded using Reed-Solomon encoding; wherein the processor uses the redundantly encoded data to detect one or more errors in the coded data; and wherein the reading device corrects the one or more detected errors.

Roustaei teaches an optical code reading system wherein a coded data is redundantly encoded using Reed-Solomon encoding; wherein the processor uses the redundantly encoded data to detect one or more errors in the coded data; and wherein the reading device corrects the one or more detected errors (see abstract; col. 3, line 66 to col. 4, line 16; and col. 4, line 54 to col. 5, line 8). In view of Roustaei's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the

invention was made to employ the well known Reed-Solomon code; and a system for detecting errors in the coded data and correcting the detected errors to the teachings of Wilz in order to ensure that the information read from the optically encoded data is accurate.

### ***Allowable Subject Matter***

12. Claims 39-51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record, taken alone or in combination, fail to teach or fairly suggest wherein the coded data is disposed with at least one layout, the layout having at least order  $n$  rotational symmetry, where  $n$  is at least two, the layout including  $n$  identical sub-layouts rotated  $1/n$  revolutions apart about a center of rotational symmetry of the layout, the coded data disposed in accordance with each sub-layout including rotation indicating data that distinguishes the rotation of that sub-layout from the rotation of at least one other sub-layout within the layout.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pat. No. 6,764,012 to Connolly et al

US Pat. No. 6,607,134 to Bard et al

US Pat. No. 6,234,393 to Paratore et al

US Pat. No. 6,375,079 to Swartz

US Pat. No. 5,837,990 to Shepard

US Pat. No. 4,935,610 to Wike, Jr.

***Contact Information***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to April A. Taylor whose telephone number is (571) 272-2403. The examiner can normally be reached on Monday - Friday from 6:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [april.taylor@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
AAT

25 August 2004

  
KARL D. FRECH  
PRIMARY EXAMINER